Amendments to the Drawings:

The attached sheets of drawings include changes to Fig.1-5. These sheets, which include Fig.1-5, replace the original sheets including Fig.1-5. No changes have been made to Figs.1-4, but are merely being resubmitted in higher quality as required. In Fig. 5, previously omitted labels for items 40, 50, 60, 70, 80, and 90 have been added.

Attachment: Replacement Sheets

REMARKS/ARGUMENTS

Examiner:

New corrected drawings are required in this application because Figure 4 is unreadable and needs to be resubmitted in better quality.

Response:

Please amend the present application as described in the "Amendments to the Drawings" section of this response. Replacement drawings are being submitted as required. Additionally, Fig.5 has been altered to include the words "Computer Code" as labels for each of items 40, 50, 60, 70, 80, and 90. These labels are supported by Paragraph [0082] of the application as filed. No new material has been introduced.

Examiner:

Claims 1-2, 10-11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linzer (US 6,229,850). Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Linzer (US 6,229,850) in view of Kim. Claims 3-8, and 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response:

The method claimed in the present application is intended to be utilized on a block of a single layer of pixels in video compression (Paragraphs [0025], [0082]). The claimed selection window is this block and comprises only a single resolution. The method may be used alone, repeatedly on each of a plurality of layers, or in

combination with other methods (Paragraph [0082]).

On the other hand, the disclosure of Linzer utilizes a plurality of separate layers generated from a single video frame, each layer having a differing resolution than the other layers and progressively narrowing the search area from one layer to the next layer. "At least one reduced resolution version of the video signal is supplied from the video scaler 36 via line 44 to the first video compressor 34. The reduced resolution version is used in a hierarchical motion estimation (ME) search performed on frames of the unscaled full resolution video signal in the first video compressor 34. [sic] The first video compressor 34 performs the hierarchical ME search and generates ME search results which are supplied via line 46 to the second video compressor 38. The second video compressor 38 uses the ME search results from the first video compressor 34 in encoding the reduced resolution version supplied from the video scaler 36. For example, the second video compressor 38 may utilize an average of motion vectors supplied from the first video compressor 34 or the actual motion vectors generated by a particular hierarchical ME search stage." (Col.6, lines 23-38). As noted by the Examiner referring to Col.7, lines 7-31, similar descriptions are also found elsewhere in the reference. It also should be noted that Col.5, lines 56-61 defines "reduced resolution" as "any version of a given video signal which has a lower resolution than an unscaled version of the given signal supplied from a video source". This disclosed method is similar to the prior art, three-step search described in Paragraph [0011] of the present application.

The two methods are thus quite different, as the disclosure of Linzer cannot fully function on a single layer. For example, the Examiner compares the application's level-values to the reference's "reduced search locations" which are dependent upon results from a previous search at a lower level. In the present method, there is no necessary previous search at a lower level. Instead, the

level-values are generated by summing the match-values of all of the search locations within the single layered search window that happen to have the same most significant bit of the relevant X and/or Y coordinates (Paragraph [0035]). While it may appear that the reference generates a similarity to the application's match-values on each given level, the Applicant is unable to locate any teachings or suggestion in the reference of generating level-values as above described. The words "level-values" do not mean values for different levels, what they mean are values from search locations where the level (value) of X (or Y) is equal to "0" or is equal to "1".

However, the Applicant has chosen to amend claims 1, 10, and 16 to further clarify the present invention by including the limitation that the claimed search window comprises a single resolution. While the claimed method may be used on more than one level of any given frame, the entire method is utilized on each level. When viewed as such, the reference fails to anticipate, suggest, or motivate at least the level-values as well as the candidate results as claimed. A full description of generating candidate results according to the present invention can be found in Paragraphs [0040]-[0050]. In brief, candidate results are the also obtained from summing the match-values of predetermined search locations within the search window. Again, the reference fails to meet this limitation.

Therefore, the Applicant respectfully requests reconsideration and allowance of claims 1-2, 10-11, and 16.

Additionally, the Applicant requests acceptance, consideration, and allowance of new dependent claims 17-20. These 4 claims are supported by Paragraph [0035] and no new material has been introduced.

Sincerely yours,

Winston Hsu

Date: January 26, 2005

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Note: Please leave a message in my voice mail if you need to talk to me. The time difference between D.C. and Taiwan is 13 hours. The preferred time period for telephone conversation is 7 AM (or earlier) – 11 AM, D.C. time.

Attachment